DOCUMENT RESUME

ED 264 300 TM 860 007

AUTHOR Smith, Alan D.
TITLE Two- and Four-Year College Student Attrition Research to the 1980's: A Review.
PUB DATE [81]
NOTE 54p.
PUB TYPE Information Analyses (070)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Academic Persistence; *Attrition (Research Studies); *College Students; Demography; Dropout Rate; Dropouts; Higher Education; Literature Reviews; Predictor Variables; Socioeconomic Influences; Socioeconomic Status; *Student Attrition; *Two Year College Students; Withdrawal (Education)

ABSTRACT

Basic background information on college student attrition research studies is provided. This paper is divided into nine components that were prominent in the existing literature: (1) higher education and the concern for attrition; (2) factors involved in college student attrition; (3) demographic factors involved in college student attrition; (4) financial factors; (5) socio-economic status; (6) academic achievement; (7) stated reasons for withdrawal; (8) institution type and persistence--the four-year versus the two-year college; and (9) dropout theory. The attrition rate has traditionally been higher for the two-year college. Financial factors are generally conceived to be important in persistence. The majority of both dropouts and persisters are from the middle socio-economic level, while increased persistence has been associated with higher socio-economic status. High school grade point and rank still appear to be the best predictor of college grades, but the relationship to persistence is unclear. Although academic, health, family, and general dissatisfaction reasons were common, most items were highly varied and dependent on the specific institutional setting. (PN)

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TWO- AND FOUR- YEAR COLLEGE STUDENT ATTRITION RESEARCH TO THE 1980s: A REVIEW

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ABSTRACT

The concern for attrition in higher education has intensified in recent years, although research has demonstrated that attrition rates have not varied drastically over most of the country. The attrition rate has traditionally been higher for the two-year college. Trends concerning gender, age, marital status, and ethnic classification are still subject to controversy. Financial factors are generally conceived to be important in persistence. The majority of both dropouts and persisters are derived from the middle socio-economic level, while increased persistence has been associated with higher socio-economic status. In addition, distinction must be made between voluntary withdrawals and failures, since quite frequently voluntary dropouts have had higher verbal ability and were more intellectually oriented than persisters who continued progress towards their initial degree objective. High school grade point, high school rank still seems to be the best predictor of college grades, but its relationship to persistence is unclear. However, academic disqualification appears to be a thing of the past. Although academic, health and family, and general dissatisfaction reasons were common, most items were highly varied and dependent on the specific institutional setting, which has led many researchers to develop congruence models to explain these apparent variations.

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The concern for attrition in higher education has intensified in recent years, although research has demonstrated that attrition rates have not varied drastically over most of the country. The attrition rate has traditionally been higher for the two-year college. Trends concerning gender, age, marital status, and ethnic classification are still subject to controversy. Financial factors are generally conceived to be important in persistence. The majority of both dropouts and persisters are derived from the middle socio-economic level, while increased persistence has been associated with higher socio-economic status. In addition, distinction must be made between voluntary withdrawals and failures, since quite frequently voluntary dropouts have had higher verbal ability and were more intellectually oriented than persisters who continued progress towards their initial degree objective. High school grade point, high school rank still seems to be the best predictor of college grades, but its relationship to persistence is unclear. However, academic disqualification appears to be a thing of the past. Although academic, health and family, and general dissatisfaction reasons were common, most items were highly varied and dependent on the specific institutional setting, which has led many researchers to develop congruence models to explain these apparent variations.

Higher Education and the Concern for Attrition

The status of higher education in the United States during the 1900s was drastically different when compared with the present. Centers of higher education were faced with increasing percentages of youth graduating from high school that chose to seek admission to college instead of the work world. Colleges and universities, for the most

part, were faced with constant expansion to make room for these additional students. Much of the concern of higher education in the 1950s, for example, was focused on improvement in the methods and standards of college student selection, and less on student retention.

> The operation is complicated by the fact that the student, with or without the influence of parents and counselors, selects the institutions to which he or she applies and eventually selects the one institution among the two or more which may grant admission. The institution is thus placed in double jeopardy because it cannot select either its applicants or its admittants. It is, in effect, limited to selection among its applicants. The characterization of a college or university as highly selective is highly ambiguous. (Iffert & Clarke, 1965, p. 1)

However, even with the advent of increased enrollment, there was concern for attrition developing during this time. Iffert (1958) noted in his study that of the students who graduated in the upper half of their classes from secondary schools, about fifty percent go to college on a full-time basis and only about three-fourths of them receive a baccalaureate. Iffert concluded that no more than 60 percent of all students who enter degree granting institutions eventually receive degrees. This trend of approximately 40 percent not receiving their degrees concerned many educators.

> College dropouts represent an alarming waste of our most competent manpower. Withdrawals cannot be completely eliminated, but they can be sharply reduced--or so many administrators and educators believe. If they can be reduced, the result will be a large professional work force and a higher cultural and intellectual level of citizenry contributing to the advancement of society. (p. 99)

Iffert (1958, p.99-100), in a study based on a large sampling of approximately 13,700 men and women enrolled in institutions of higher learning in the fall of 1950, found that slightly less than 40 percent of the freshman class will remain at the institution of

first enrollment to graduate four years later. An additional 20 percent will graduate either from the original institution or transfer to others in four or more years. In this study Iffert also found that the attrition rate was somewhat higher at state supported institutions than at private institutions and approximately 50 percent of the total withdrawals occurred before the sophomore year.

Summerskill (1962) reviewed 35 different studies that cited attrition rates for entering classes of various colleges and universities from 1913 to 1962. Median values were computed for the bulk of these studies by Summerskill with results as follows: median loss in four years--50 percent; median percent graduated in four years--37 percent. Summerskill's review of the literature revealed that the 1920s showed a loss of 53 percent of entering students after four years; the 1930s showed 50 percent; the 1940s posted 49 percent; and the 1950s established 51 percent.

As colleges and universities faced different problems in the 1960s and 1970s with fluctuating enrollments of traditional students, shifting in trends, etc., the degree of completion rates over the "regular" four-year college experience has assumed a relatively constant status. Cope and Hannah (1975, p. 1) noted that during the 1960s, more than 10 million students met the required entrance requirement for over 2,500 two-year and four-year colleges. Although most of these students were probably expecting degrees, fewer than half graduated on schedule (i.e. within two or four years depending on program of study). According to Cope and Hannah, 30 to 40 percent will never earn their degrees. The 1970s, not unlike the 1960s, has not shown any drastic

change in this trend (p. 1). Therefore, while attrition rates may be variable from institution to institution (Astin, 1975; Cope & Hannah, 1975; Huber, 1971; Summerskill, 1962), the rate for the nation as a whole has not changed very much in the last five to six decades (Astin, 1975; Bayer, et al., 1973; Cope & Hannah, 1975; Summerskill, 1962). Moreover, graduation rates in higher education generally are reported at the expected 40 to 60 percent (Astin, 1972, 1975; Bayer, et al., 1973; Cope, 1978; Cope & Hannah, 1975; Eckland, 1964; Iffert, 1957; Kesselman, 1976; Knoell, 1960; Kowalski, 1977; Panos & Astin, 1968; Sexton, 1965; Shulman, 1976; Summerskill, 1962). At any rate, dropouts, as defined in this study, outnumber persisters in many instances. Pervin, et al. (1966), showed that variation from college to college was great for those graduating on schedule. According to Pervin, et al., University of Georgia had a low graduation rate of 35 percent, while Princeton University had a high graduation rate of 80 percent.

Furthermore, not only do the dropout rates vary from college to college, but also the year of withdrawal and the stated reasons for dropping out. According to Pervin, et al., half of all withdrawals throughout the country occurred by the end of the freshman year. At the University of Iowa, for example, over 74 percent of the recorded withdrawals take place before the beginning of the sophomore year. Other colleges such as Princeton and Harvard, however, tend to distribute dropouts more evenly over the four years (p. 8).

In addition, unfortunately, most of these studies only considered freshmen in four-year institutions since junior college students

are less likely to continuously progress towards attendance and degree competition than their four-year counterparts (p. 1). It has been found that the rate of dropping out among community college students is appreciably higher than the rates at four-year institutions (Astin, 1975; Cope & Hannah, 1975). Astin (1975) in his study found that of all types of institutions, the public two-year or community colleges consistently show the highest dropout rates (mean of approximately 59 percent). These rates were somewhat higher for public two-year colleges located in the West and Southwest (approximately 65 percent) (p. 111). Astin concludes that the type of institution can have a significant impact on the student's chances of completing college. Their changes are minimized by attending a two-year institution (p. 126-127). Cope and Hannah (1975) in the consideration of attrition at two-year institutions state that:

> Although reliable data on community colleges are difficult to find--in fact, they are usually artfully buried--nationally it appears that approximately one-half of community college students do not return for a second year and only about half of the remaining students go on to complete the requirements for the associate degree. (p. 2)

Thus, according to Cope and Hannah, it is their estimate that about two students in ten entering community colleges stay on to complete the requirements for a baccalaureate degree (p. 2). Thus, "Dropping out is an interaction between an individual and an institution" (p. 4). Unfortunately, another limitation in most related research is that many studies attempt to ascertain the characteristics of dropouts versus nondropouts without considering the characteristics of the institution; according to Cope and Hannah (1975, p. 9), this approach is inadequate.

The losses to educational institutions because of high attrition rate have been well established in a review of the literature (Astin, 1969, 1975; Bayer, et al., 1973; Cope & Hannah, 1975; Iffert, 1957; Iffert & Clarke, 1965; Summerskill, 1962). In describing the dimensions of the problem, Cope and Hannah (1975) suggested that the institution loses in several ways:

> First, substantial sums of money are devoted to attracting students, particuarly to liberal arts colleges. Then, there are investments of time and energy in teaching, counseling, record maintenance, housing, and other forms of effort to accommodate student growth. There are also scholarships, loans, work-study programs--everything involving monetary cost. The graduate becomes a credit, an alumnus, or alumna, a representative. The nongraduate erodes institutional capacity and credibility. (p. 6)

Thus,

> The effectiveness of higher education can be improved if we learn more about why a large proportion of the students withdraw, what happens to them, and what can be done. (p. 6)

Factors Involved in College Student Attrition

Research on college dropouts has not successfully revealed needed information about why students withdraw from their enrolled institutions (Astin, 1969, 1975; Bayer, et al., 1973; Cope & Hannah, 1975; Knoell, 1966; Panos & Astin, 1968; Summerskill, 1962; Terrass, Note 2). Knoell (1966) considered the study of attrition in terms of college attendance and student flow models. In "A Critical Review of Research on the College Dropout," Knoell states:

> College dropout studies may soon rival college prediction studies in sheer numbers, but there appears to be little advancement of

> knowledge in either field by the accretion of discrete, routine studies of the type now being made in countless colleges and universities. (p. 63)

Knoell's prediction appears to be coming true since this writer alone has compiled a list of 130 recent dissertations that deal with some type of college student attrition.

Cope and Hannah (1975) concluded that most colleges know very little about why their students withdraw. To some extent, the reasons why students withdraw may result from differences in selection requirements and economic background.

> State institutions which must by law accept all or a majority of the state's high-school graduates on application usually have a high, early dropout rate. Moreover, many of these students do not have the financial reserves with which to meet personal or family reverses. (Pervin, et al., 1966, p. 8)

There appears to be reason to suspect other factors that are of considerable importance to attrition other than economic background and selection processes, such as motivational factors. At the University of California, for example, only the top 15 percent of the high school graduates are eligible for admission; unfortunately, 45 percent of the students enrolled in the school withdraw before completing the requirements for a degree (p. 8). Even the most prestigious colleges with very selective admission policies still have dropouts.

According to Pervin, et al. (1966, p. 9), these variations in the patterns and rates of withdrawal coupled with the importance of motivational factors suggest the need for extensive and systematic research. This research should consist of demographic studies, sociological studies of institutions, psychological studies of individual

students involved in the interaction with the various aspects of the college enrollment.

Moreover, when a serious attempt is made to define these factors, a problem arises with the defining of one who withdraws from college as a dropout: one can never be certain when or if a student who withdraws will return to college. Kesselman (1976) found in the literature that only a small minority of those students who do leave school can be considered dropouts. Tinto and Cullen (1973) in an intensive survey of the literature, looked at the two very common definitions; they are: (1) dropout as referring to those students who leave the college in which they are registered; and (2) dropout as referring to those students who never receive a degree from any institution of higher education. A researcher who accepts these definitions faces two important limitations according to Tinto and Cullen:

> the tendency to direct attention toward the goal of efficiency rather than effectiveness, and the tendency to ignor the perspective of the individual student. (p. 5)

In terms of efficiency versus effectiveness in higher education, Tinto and Cullen suggested that there is little if any research to suggest that efficiency is related to effectiveness in higher education. The second limitation studied by Tinto and Cullen is the tendency to ignore the perspective of the individual. Tinto and Cullen suggested that investigators frequently overlook the variety of abilities, interests, motivations, and levels of commitment to the goal of college completion that students have when they enter institutions of higher education. In fact, the goals and purposes of higher education may be unsuited to the

needs, desires, and interests of a large number of students who still enroll in college. Hence, many definitions that ignore these facts at least imply "connotation of inferiority on the part of the individual who drops out" (p. 6). An acceptable definition of the dropout suggested in Tinto and Cullen's study was that a "dropout represents the failure of individuals, of given ability and goal commitment, to achieve desired educational goals" (p. 78). Thus an important interaction between the needs and desires of the individual student and the concerns of the institution is implied.

Furthermore, with these considerations in mind, a student in the past that was classified a dropout may have been a stopout. In a 1971 survey of colleges in this country it was reported that of a 53 percent dropout population, 84 percent fully expected to get the baccalaureate degree and 51 percent eventually plan to enter graduate degree programs (Kesselman, 1976, p. 3). Studies at Princeton indicated that 70 percent of the students who left this institution came back to get their respective degrees. Therefore, according to Kesselman, these figures support the claim that the general education community is only beginning to discover that

> most of the dropouts among college students are merely stopouts, and that among them are America's brightest and most promising scholars. (p. 3)

Hence, defining a dropout as a student who has not completed a baccalaureate degree four years after initial enrollment (Bayer, 1968; Iffert & Clark, 1965) may be obsolete. Cope and Hannah (1975) and Sexton (1965) collectively agree that dropping out and/or stopping out may

be constructive and make a positive contribution to the student's overall welfare.

Therefore, there is a documented need to collect data that are specifically designed to identify factors associated with eventual withdrawal from college. These data should not only contain easily collected demographic data (sex, age, SAT scores, financial aid) but also consider variable interaction since:

> Variables may operate concurrently as moderating, suppressing, or accentuating factors relative to academic performance, withdrawal, or other variables. (Cope & Hannah, 1975, p. 8)

Demographic Factors Involved in College Student Attrition

Demographic data collection and its statistical manipulation traditionally has been a major technique in the analysis of college student attrition rates (Alfert, 1966; Astin, 1965, 1971, 1975; Bayer, 1968; Bayer, et al., 1973; Clegg, Prichard, & Weigard, 1979; Cope & Hannah, 1975; Gorter, 1978; Summerskill, 1962; Tibby, Hirabayashi, Olson, & Peterson, 1978; Tweddale, 1978). Most of the attrition appears to be during the first year and among those who are academically less talented (Cope, 1978; Cope & Hannah, 1975; Sexton, 1965).

In terms of sex, women have been found to have a slightly higher probability of completing their bachelor's degree in four years than men (Astin, 1972; Roger & Creager, 1976). This implies that women tend to graduate on schedule more often than men, but men are more likely to complete degree requirements (Cope & Hannah, 1975; Tinto & Cullen, 1973). However, several studies over the years suggested that there is not a significant difference between attrition rates among men and women

(Iffert, 1975; Summerskill, 1962; Summerskill & Darling, 1955). Summerskill (1962, p. 632), suggestion that men and women students withdraw at similar rates "does not mean they withdraw for similar reasons." Astin (1969, p. 221) in a study of 6,660 high aptitude students found that women had a significantly higher dropout rate than men. Astin found that male dropouts were more inclined to check doubts about the appropriate course of study, poor academic performance, and dissatisfaction with being a student as their reasons for leaving. Female dropouts, on the other hand, are more likely to check family responsibilities and money. A more detailed look at sex differences in terms of reasons for withdrawal are presented in the section in this paper entitled, "Stated Reasons for Withdrawal".

Astin (1975, p. 12) in a more recent study dealing with the class of 1968 entering freshmen, 681,281 of which were male and 500,611 of which were female, found that women were "more likely than men to complete the Bachelor's degree in four years." Astin found that even including those students who did have a degree at the end of four years, but were enrolled continuously since 1968 and at the time of the study were currently enrolled, women showed a higher persistence rate. Interestingly, though, Astin found that the graduate school attendance rate is about three percent higher among men than among women. Clearly, according to Astin, the relative loss of women in the transition from undergraduate to graduate study is substantial. Of course, this issue is complex and outside the confines of this study.

Another popular and more traditional approach taken in student attrition studies at the post-secondary educational level is the

comparison of persistent and nonpersistent students by age. Age at matriculation studies have shown no consistently conclusive findings. Studies at three different colleges have shown similar attrition rates for both younger and older students (Gable, 1975; Suddarth, 1975; Thompson, 1953). Summerskill and Darling (1955) suggested from research results done at other colleges that older students are somewhat less likely to graduate than their younger counterparts. This trend has been supported by both Newman (1965) and Trent and Medsker (1967). A study of nonreturning students completed by the Office of Institutional Analysis (Tweddale, 1978) based on a survey of students enrolled Fall, 1977, who did not re-enroll Winter, 1978, in seven colleges, found that in four undergraduate colleges, only 14 percent of the nonreturnees fell in the 18-19-year-old category. According to Tweddale (p. 12), this tends to cast doubt on the commonly held conception that primary retention efforts should be focused on the new entering freshman student who was only recently graduated from high school. Astin (1975, p. 44) in a comprehensive study found that older students, particularly older women, are more likely to dropout than students of traditional entry age (17-19). Slark (1978) concurred that those students who did not re-register were slightly older. Slark also found that these older nonpersisters had completed more years of previous school and filed their applications earlier than those who did continue to register. In the study, Slark noted that while 44 percent of the registrants were under 21 years of age, only 26 percent of the nonregistrants were of that age group. More nonregistrants were in the 22 to 50 age group than persisters (p. 8). Slark concluded that:

> This data implies that the non-registrant (41%) is typically older and probably involved in a more complex life style than the recent high school graduate. They generally have had previous college experience and have expressed a desire for more but evidently are not pressed to do so. (p. 8)

Older literature appears to support the general conclusion that age alone does not affect attrition although older undergraduates may encounter more obstacles to graduation (Summerskill, 1962, p. 631). However, more recent studies appear to point to a significantly difference one way or the other, depending on the individual institution.

Marital status is another demographic variable that is often used in student attrition, primarily due to its easy accessibility from student records. Astin (1975, p. 45) concluded in a recent research effort that:

> being married at the time of college entry increases women's chances of dropping out by about 11 percent, but it decreases men's chances by about 8 percent.

Interestingly,though, when marital status and financial support are considered together, Astin (p. 70) found that students who are married when they enter college persist better if their spouses provide major support for their college costs. However, if the spouse is only able to provide minor support, the effect is reversed. Hence, marital status is deeply and strongly related to persistence and nonpersistence and its long-term effects. This is especially true if financial, residence, and employment factors are also considered.

Another demographic variable that was researched for the present study was ethnic background or race. Panos and Astin (1968, p. 64) found that in a study of 30,570 student who completed a follow-up questionnaire, those students whose racial background was either

American Indian or "other" when combined with other socio-economic factors were most likely not to complete college within four years following matriculation. According to Astin (1975, p. 36), whites and orientals clearly have the lowest dropout rates, while Chicanos and American Indians have the highest dropout rates. However, Astin suggested that the high rate for Chicanos was largely attributable to their heavy concentration in two-year colleges. Tibby, et al. (1978) found in a recent study of nonpersisting students the following dropout rates by ethnicity: Asian (7 percent), Caucasian (10 percent), Chicanos (15 percent), and black (20 percent). These figures are somewhat similar to those found by Astin (1975) and Panos and Astin (1968).

Astin (1972) in College Dropouts: A National Profile discussed, among other variables and their relationships, the importance of background factors such as sex, race, and parental background on student dropouts at a representative sample of 217 institutions, including both two-year and four-year institutions. In this study, concerning race, Astin concluded that:

> so far as remaining in college is concerned, being black is somewhat of a liability in a two-year college, but an asset in a four-year college or a university. (p. 48)

Financial Factors

Financial concerns traditionally have been some of the most important contributors of college attrition (Astin, 1969, 1971, 1975, 1977; Iffert, 1958; Iffert & Clarke, 1965; Monroe, 1972; Summerskill, 1962). Iffert (1958, p. 60) commented that: "In college, as in the market place, the ability of the consumer to pay for the product is

important." Thus, lack of financial resources is a major cause of transfer or dropping out of college altogether (p. 60).

Summerskill (1962, p. 647) suggested that the relationship between students' financial status and persistence is complicated by several important considerations:

1. The costs of attending college vary greatly from one institution to another, as do the colleges' resources in scholarships and loans.

2. Studies on the relationship between financial status and attrition require careful controls on academic ability because the good student frequently has more scholarship aid.

3. The importance of financial difficulty in attrition is over estimated if students find this reason more permissible than lack of motivation or lack of ability.

4. Self-support and part-time work are poor indicators of success or failure at college. (p. 647)

Cope and Hannah (1975, p. 17) after an extensive review of the literature, noted that financial reasons have been a major concern in a substantial number of studies. These studies frequently report that the lower the level of family education, lower the occupational position, and lower the family income, the greater chance a student has of being among dropouts. However, Astin (1972) found family income unrelated to persistence, which has been criticized by Tinto (1975). Tibby, et al., (1978) also reported that the dropout rate did not appear to be particularly related to family income. Others have reported that higher income is positively related to persistence (Astin, 1975; Iffert, 1958; Tinto, 1975; Van Alstyre, 1973). Tibby, et al., (1978) discovered in their research that parental support of the student's education was positively related to retention.

However, Cross (1968, p. 19), in a comprehensive study concerning junior colleges, reported that few students appear deterred from going to college because of cost. Cross determined that only one percent of the junior college students and five percent of the non-college attending youth stated that their parents would like them to go to college but felt that they could not afford it. Although, according to Cross (p. 468), few students rejected college attendance on the basis of costs alone; many students gave cost major contemplation in their selection of a college. Cross summarized some of her work by stating that:

> While few students admit major financial worries on the questionnaires, the cost of education does seem to influence their decisions: Students say that low cost is a major reason for selecting the junior college; the attendance rate among students from lower socio-economic backgrounds is greater in those communities that have junior colleges; junior college transfer students give financial problems as a major reason for withdrawal from senior college. (p. 24)

Adding to this phenomenon, Trent and Medsker (1967, p. 107) found that although withdrawals appeared to be at some economic disadvantage, fewer withdrawals than persisters sought loans. According to Trent and Medsker, information from interviewed students revealed that the main reason for students not applying for loans was indifference on the part of nonpersisters.

The role of financial support is important in many decisions that students make prior to attending college as previous research shows. Research by Astin (1975) demonstrated that in a follow-up questionnaire, one of the most frequent reasons for dropping out for both men and women was financial difficulties. Astin (p. 69-71)

revealed that the source and amount of financial aid can be an important factor in the student's persistence. Some of Astin's relevant findings were:

1. Receiving support from parents for college expenses generally enhance the student's ability to complete college.

2. Scholarships and/or grants are generally associated with small increases in student persistence rates.

3. The dependence on loans is equated with decreased persistence among men in all income groups.

4. Participation in federal work-study programs appear to enhance persistence especially among women and blacks. According to Astin, work-study has its most consistent positive impact among students from middle-income families.

5. Student savings and/or other assets appear to decrease student persistence.

6. Support from ROTC (Reserve Officers Training Corps) is strongly associated with student persistence.

7. In terms of financial aid packages, any form of aid appears to be most effective if it is not combined with other forms.

The results of Astin's study suggested that student persistence will be maximized if the funds are concentrated in work-study programs and, to a lesser degree, if grant programs are sought instead of loans.

Socio-economic Status

Tinto (1975, p. 10-12) in synthesizing recent research on the topic of persistence and nonpersistence concluded that in relation to

social status, there has been an increase since 1965 in the overall effect of social status upon college persistence. Furthermore, Tinto indicated that higher social status students are more likely to be enrolled in the college preparatory curriculum in the secondary schools. These students are more likely to be enrolled in baccalaureate degree granting institutions (p. 29). According to Tinto, the effect of social status upon the completion of a four-year college is even greater than suggested by the literature he reviewed. Measured ability itself, as indicated by Tinto (p. 12), is affected by the social status of the individual, since persons of higher social status are more likely to score higher on tests of ability than persons of lower social status of comparable characteristics. Thus, the studies reviewed by this researcher somewhat underestimates the effect of social status on college persistence simply as a result of bias in the measure of ability (p. 12).

Monroe (1972), in a discussion of socio-economic factors as they relate to the dropout problem, suggested that:

> Among the many complex psychological and social environmental factors contributing to the successful motivation of college students, the influence of the home is paramount. (p. 212)

Monroe suggested that the family factor operates on several different levels, and one of them is the socio-economic level of the family.

Trent and Medsker (1967), in a large and comprehensive longitudinal study dealing with more than 10,000 high school students, evaluated the importance of socio-economic status on college attendance. The socio-economic status classification was based on the father's occupation--a common approach and similar to the nature of studies

either reviewed or completed by Monroe (1972) and Tinto (1975). Trent and Medsker (1967) found that socio-economic level was statistically related to persistence, but the difference among the males in socio-economic status was less prominent than differences in ability between persisters and nonpersisters. Trent and Medsker (p. 106) further discovered in their research that the majority of both persisters and nonpersisters were at middle socio-economic level for both sexes. At the higher level, there were 13 percent more student persisters than nonpersisters among the males and 15 percent more student persisters than nonpersisters among the females, but at the low socio-economic level there were 9 percent more nonpersisters than persisters for both sexes.

In conclusion, most research reviewed had established a significant relationship between socio-economic status and persistence in general.

Academic Achievement

Rossman and Kirk (1970) compared persisters, voluntary withdrawals, and failures with scores on the School and College Ability Test (SCAT), the Omnibus Personality Inventory and questionnaire data in order to differentiate between persisters and nonpersisters. They found that the voluntary withdrawals (both men and women) had highest verbal ability and were more intellectually orientated. In addition, voluntary withdrawals also had significantly higher SCAT scores than the failures and the female withdrawals were less practically orientated than the female failures. These findings are very similar to results of other related research studies (Cope, 1978; Cope & Hannah,

1975; Dresser, 1971). In fact, some recent researchers have found in their studies that voluntary withdrawals have significantly higher grades than do students who stay on to graduate (Cope & Hannah, 1975).

Results reported from a survey of a random sample of college bound high school seniors, 1974-1975, who took the SAT in the 12 states that comprise the College Entrance Examination Board's Western Region (Tibbey, et al., 1978, p. 33-35) were:

1. The act of taking the SAT appears to be one prediction of persistence in college.

2. Approximately three-fourths of the dropouts reported high school grade averages of at least 3.0.

3. A majority of the students had GPA's of 2.0 or better, thus suggesting to the authors that "Academic disqualification appears to be a thing of the past" (p. 34).

4. Dropouts carried lighter academic loads and worked more hours per week than the nondropouts.

5. The dropout appeared to be less able, academically, and less career goal orientated than persisters.

6. There seems to be a different attitudinal set towards the college experience between dropout proneness and persistence proneness students. According to Tibbey, et al., dropout-prone students seem to view college experience less pragmatically and more emotionally than persistence-prone students.

Moreover, entrance exam test scores such as the SAT and the CEEB (College Entrance Exam Board) composite tests have been found to

be positively related to persistence in college. In general, the higher the score of entrance exams, the greater the chance the student will persist (Astin, 1972, 1975; Bayer, 1968; Cope, 1978; Cope & Hannah, 1975; Rever, 1978; Tibbey, et al., 1978). However, Astin (1975, p. 32) found in his exhaustive study found that while students' composite scores on the SAT and ACT significantly contributed to the improvement of prediction of dropout-proneness, the predictive strength of these test scores were consistently less than that of high school grade point average. Tinto (1975) further distinguished the predictive strength of composite test scores by inspecting differences between voluntary and academic dismissal. The voluntary withdrawal frequently had higher test scores than the student persister. This trend and other related phenomena will be more thoroughly presented in this section dealing with the section on dropout theory.

In terms of high school grades and performance, a wealth of literature has shown that grade point average and/or class rank are significant determinants of college academic success (Astin, 1969, 1972, 1975; Bayer, 1968; Cope, 1978; Iffert, 1958; Iffert & Clarke, 1965; Summerskill, 1962). Astin (1975, p. 30),in his review of pertinent literature,found that a substantial body of research clearly has shown that a student's academic performance in secondary school is a major predictor of college attrition. The measures employed in most of the studies reviewed by Astin were high school grade point average, high school rank in graduating class, and academic ability as measured by college admission test scores. In addition, Astin's literature review has shown that these measures have been related to

college nonpersistence in diverse institutional settings such as junior colleges, public universities, private colleges and for diversified student groups such as high ability students, blacks, and engineering students. Astin (1971, 1972) and Panos and Astin (1968) have shown in their research that these measures of academic success and performance have been positively related to academic performance. Summerskill (1962) reported that high school grades are generally considered the best predictor of college grades. Summerskill, in reviewing related literature, found that in ten of eleven studies dealing with the college dropout had found lower high school grade average for college nongraduates. Both Astin (1972) and Tinto (1975) found that high academic performance is the best predictor of college success.

When considering the evidence between college grades and college persistence, a relationship does exist; but its exact nature is still unclear. Summerskill (1962, p. 636) concluded from a study of thirty-five studies on college grades that a significant relationship exists between these two variables. A few of his conclusions from this review were:

1. One out of three dropouts left school due to academic failure.

2. The probability of dropping out varied inversely with grade point average.

3. Academic failure was cited as the leading cause, or one of the leading causes, of nonpersistence.

4. Poor or failing grades at the start of the student's college career were highly predictive of nonpersistence.

However, Summerskill qualified these trends by indicating that the majority of students leave the college environment for nonacademic reasons. Summerskill (p. 637) further delineated these issues by concluding that the attrition problems that predominate in the colleges involved the students' failure to meet the psychological, sociological, or economic demands rather than the strictly academic demands of the college environment. This concept involves institutional fit or congruence between the student and the social climate of the student's institution of higher education. This concept along with other related concepts will be explored in more detail in the section dealing with dropout theory.

A research effort by Ammons (1971) was attempted to determine variables that contributed to academic persistence. Ammons examined 1,691 St. Petersburg Junior College students that were tested two years after their initial enrollment. In this research effort, ten cognitive variables and 16 noncognitive variables were examined in an attempt to determine their relationship to persistence. Results of this study indicated that the first semester grade was the best single predictor of persistence. Ammons also found that there was a significant difference between the means of graduating and nongraduating students on all the cognitive variables and a portion of the noncognitive variables. In addition, Ammons also discovered that a large section of the nonpersistent population had a grade point average of 2.0 or greater.

Conceptually, a relationship between the academic or intellective factors does exist as demonstrated in the literature. However, as previously indicated, any attempt to account for college student

attrition must include a variety of complex and interactive factors besides intellective factors. Monroe (1972, p. 210) summarized the complexity of the situation by the following statement:

> If intelligence accounts for one-third of the withdrawals, what accounts for the remaining two-thirds? I believe that two other factors, motivation and finances account for most of the remaining two-thirds. No one can say what percentage of college failures can be attributed to lack of motivation, but it must be the most predominant single factor. The failure to work hard, to persist, to carry on no matter what the academic obstacles is a most important cause of dropout in colleges.

Stated Reasons for Withdrawal

Research findings conducted by Cope and Hannah (1975, p. 60-61) revealed that academic ability was the best indicator of the likelihood a student will return to higher education. However, according to Cope and Hannah, the cause of withdrawal is also a good indicator of whether or not the student will return. Those students citing marriage and job opportunities are least likely to return, while those students citing personal problems or lack of goals are most likely to return. Sexton (1965, p. 302) supported these findings in his research and found that in most withdrawal studies, the time of dropping out was found to be significant as well as the reason for leaving. Sexton discovered that for the majority of students, the first year was the most difficult in terms of persistence. Although academic, financial, and family problems (which are discussed in detail in other sections of this chapter) rank relatively high as possible reasons for withdrawal, other reasons need to be investigated in order to more fully understand the "why's" of student persistence and nonpersistence, regardless of college enrollment.

Gorter (1978) in a research effort to study nonreturning students at Mercer County Community College in Trenton, New Jersey, found that the two most frequently given reasons for not returning included financial difficulties and getting a good job. Academic reasons were cited more often by full-time students, while part-time students cited family responsibilities, lack of course offerings, and transferring more frequently. When the large number of "other" responses were reviewed by Gorter, lack of motivation, goal direction, and committment were cited as reasons for not returning. Gorter suggested that a college could lower its student attrition rate somewhat by providing more contact with teachers and students, especially their advisors and counselors.

Along similar lines of research, Slark (1978, p. 2) also conducted a site specific survey to review the more important reasons for nonpersistence. The largest concentrations of reported reasons were the desired class was closed, going to another school, class of interest was not offered, class not offered at a convenient time, and lost interest.

Astin (1975), in a large and comprehensive study, found that the most frequent reasons for dropping out for both men and women included boredom with courses, financial difficulties, and dissatisfaction with collegiate requirements or regulations. Women gave marriage, pregnancy, or other family responsibilities more often than any other stated reason. A partial list of the most significant reasons that were cited by nonpersisters by males and females in Astin Study can be found in Table 1.

TABLE 1

Students' Reasons for Dropping Out

Stated Reason	Male (Percent)	Female (Percent)	All Students (Percent)
Boredom with Courses	36	25	32
Financial Difficulties	29	27	28
Some Other Reason	31	24	28
Marriage, Pregnancy, or Other Family Responsibilities	11	39	23
Poor Grades	28	14	22
Dissatisfaction with Requirements or Regulations	24	20	22
Change in Career Goals	19	20	19
Inability to Take Desired Courses or Programs	12	9	11
Good Job Offer	10	6	9

Note: From Preventing Students From Dropping Out by A. W. Astin, San Francisco: Jossey-Bass Publishers, 1975, p. 14.

Cope and Hewitt (1971, p. 50) in applying an environmental or institutional fit approach (examined more thoroughly in this chapter in the section dealing with dropout theory) found that social rather than academic reasons accounted for most of the variations in their component analysis. In the social category, the most prominent reasons for withdrawing included inability to express oneself, meeting more

cosmopolitan students, difficulty with students who had different standards, not finding congenial groups, and feeling lost (too big and impersonal).

Panos and Astin (1968, p. 62) reported in a large national study that the major reasons for leaving the college of matriculation in 1961 varied somewhat by sex. Males cited dissatisfaction with college environment, wanted time to reconsider interests and goals, and could not afford cost of school most often as major reasons for withdrawal. Females stated marriage, dissatisfaction with college environment, and changed career plans as the major reasons for leaving.

Iffert and Clarke (1965, p. 27) reported in their national study involving higher educational institutions during the 1956-1957 time period, both public and private, that the students who withdrew cited academic reasons as the primary cause for nonpersistence (35.8 percent for public colleges and 58.7 percent for private colleges). This category included reasons of poor grades, lack of interest, and "other." Health and family reasons were cited as second, with public colleges containing the highest percentage of students in this category (29.8 compared to 19.4 percent in private colleges). A few of the specific reasons in this category included marriage and sickness of self and/or family. Financial reasons, which included lack of funds and need to return to work, were cited next (dominated by public colleges), followed by dissatisfaction. Dissatisfaction, the fourth most cited reason for students leaving, items included size of institution, evening classes and difficulty in commuting, and prefer coeducational institution (public colleges had 8.0 percent of

nonreturning students citing this group of reasons, while private colleges had only 3.5 percent). Another important occurrence to note in this study by Iffert and Clarke is that the "other" or unstated reason under each category was large and needed more investigation to discern more specific reasons and possible causes of withdrawal.

Dock (1979, p. 2) summarized a few of the basic findings of a more recent attrition study originally authored by P. T. Witteman of Admissions and Records at the State University at Buffalo. The study was based on a 27 percent return rate of questionnaires sent to 1,262 students who did not return to the University between Spring, 1978, and Fall 1978. The major reasons that were cited by nonpersisters for leaving the University included: (1) University too large and/or classes too large, (2) dissatisfaction with teaching at the University, (3) transferred to another college, and (4) excessive emphasis on grades. The author of the report suggested three aspects that the University does have control over in order to curb its high attrition (i.e., approximately four percent higher than might be expected of this type of university). These suggestions were: (1) activities to provide a sense of closeness to the students, (2) encourage faculty and student interaction at all levels, and (3) overt behavior must be attended to so a sense of human interest can be provided by the institution.

Research findings reported by Smith (1980) for student nonpersister respondents' reasons for leaving the University revealed several important results. Low grades as a reason for leaving the University was cited by 67.8 percent of nonpersister respondents as not a reason; only 17.8 percent cited low grades as a major or moderate reason for withdrawal. In fact, the following reasons for withdrawal were considered by more than

half of the student nonpersisters sampled as not important: (1) courses too difficult, (2) major or courses not available, (3) unsure of major, (4) dissatisfied with major, (5) course work not challenging, (6) dissatisfied with instruction, (7) learned all needed, (8) accepted job, (9) could not find a job, (10) not enough money for school, (11) applied but unable to obtain financial aid, (12) financial aid not sufficient, (13) child care not available or too costly, (14) school too expensive, (15) study too time-consuming, (16) personal or family illness, (17) personal or family problems, (18) fulfilled goals in schooling, (19) transportation problems, (20) moved out of the area, and (21) did not feel part of the University. Table 2 presents the reasons for leaving the University that were cited as being most important by student nonpersister respondents. Conflict with job and studies, not enough money for school, and needed temporary break from school were reasons cited by more than 20 percent of the student nonpersister respondents. The reasons that were least cited by student nonpersisters (i. e. less than five percent of total respondents) included accepted job, fulfilled goals in schooling, courses too difficult, and child care not available or too costly. Smith concluded that in his investigation, 20 of his 25 reasons for withdrawal were listed as not a reason for the majority of student nonpersister respondents (i.e. 50 percent or more). Data in Table 2 illustrate the various items describing students' reasons for withdrawal from the University according to their rank order. Conflict with job and studies was cited more often and the two reasons of courses too difficult and child care not available or too costly were cited the least by student nonpersister respondents.

TABLE 2

Percentage and Ranking of Major Reasons
for Withdrawal from the University
Cited by Student Nonpersister Respondents

Reason for Withdrawal	Percent of Total Respondents	Ranking
Conflict with Job and Studies	23.1	1
Not Enough Money for School	21.5	2
Needed Temporary Break from School	20.9	3
Unsure of Major	12.7	4
Inadequate Study Techniques or Habits	11.1	5
Personal or Family Illness	10.7	6
Applied but Unable to Obtain Financial Aid	10.4	7
Dissatisfied with Major	10.3	8
Major or Courses Not Available	10.1	9.5
Dissatisfied with Instruction	10.1	9.5
Study Too Time-Consuming	9.4	11.5
Personal or Family Problems	9.4	11.5
Did Not Feel Part of the University	8.7	13
Low Grades	7.7	14.5
Learned All Needed	7.7	14.5
Financial Aid Not Sufficient	6.3	16
Could Not Find a Job	5.9	17
Course Work Not Challenging	5.5	18.5
Moved Out of the Area	5.5	18.5

TABLE 2 (Cont.)

TABLE 2 (Cont.)

Percentage and Ranking of Major Reasons for Withdrawal from the University Cited by Student Nonpersister Respondents

Reasons for Withdrawal	Percent of Total Respondents	Ranking
School Too Expensive	5.3	20
Transportation Problems	5.0	21
Accepted Job	4.5	22
Fulfilled Goals in Schooling	4.3	23
Courses Too Difficult	3.4	24.5
Child Care Not Available or Too Costly	3.4	24.5

Note. From A study of selected variables among student persisters and nonpersisters enrolled in the general and the community and technical colleges by A.D. Smith (Doctoral Dissertation, The University of Akron, 1980). Dissertation Abstracts International, 1980, 41A/03, p. 963-A. (University Micro-films No. 8019117), p. 285.

In general, however, it must be remembered that several questionnaires that ask students why they withdraw may provide useful information, but the results are confounded and confused by the withdrawing student's lack of response (referred to as a problem by many

researchers in this field) and the individual student's inability to state and/or rank his "true" reasons for withdrawal (Terrass, Note 2). Thus, students may list more acceptable responses than the actual perceived ones (Summerskill, 1962). Yuker, et al., (1972) indicated that the academically better qualified student may list dissatisfaction with dorm and/or other nonacademic or nonintellective activities, while the academically less qualified student may be more adapt to list personal and/or financial reasons for withdrawing. These and other factors must be taken into account when interpreting any research findings of student surveys.

Institution Type and Persistence: The Four-Year Versus the Two-Year College

It is commonly conceived and supported by many researchers that public institutions of higher education tend to have higher dropout rates than private institutions (Astin, 1972, 1975; Cope & Hannah, 1975; Iffert, 1958; Iffert & Clarke, 1965; Summerskill, 1962: Van Alstyne, 1973). One possible reason for this phenomena is that much of the student selection process may take place before entering private colleges, while similar selection may take primarily within the public institutions after entrance (Astin, 1972; Cope & Hannah, 1975; Van Alstyne, 1973).

It is also as equally clear in the literature that two-year colleges have higher dropout rates than do four-year colleges, even after basic student characteristics have been taken into account (Astin, 1972, 1975; Cope & Hannah, 1975; Bayer, 1973; Monroe, 1972;

Van Alstyne, 1973). Astin (1972, p. 47), in explaining this trend, suggested that two-year colleges tended to recruit students with rather poor grades in high school and low test scores, and it is not surprising that their dropout rates were relatively high. Monroe (1972) noted that:

> The holding power of the community college leaves much to be desired. Many of the larger community colleges would be fortunate to have 30 percent of the freshmen class return for the second year. Fifty percent returnees is a high figure. (p. 208)

However, in order to make comparisons meaningful, a measure of persistence is needed that is comparable for these two groups of institutions. Astin (1972, p. 48) picked the standard to be proportion of students who returned for a second year. The formula that was developed to predict this outcome at four-year institutions was applied by Astin to the input data for students entering two-year colleges. Even with this procedure, two-year colleges appeared less successful than four-year colleges and universities in retaining their students. Astin (1972, p. 49-50) further emphasized that these higher student attrition were primarily attributable to the lower level of motivation and academic preparation of students entering two-year colleges. According to Cross (1968, p. 51), two-year college students did not feel as well prepared for college as their four-year counterparts. As a group, two-year college students were less confident of their academic abilities and were frequently critical of their secondary school courses and teachers. The only areas Cross found that two-year college students expressed equal or greater confidence than the four-year college group were in nonacademic abilities such as manual skills, sports, and

cooking. Hence, the two-year college student has been seen in the literature as an academic inferior when compared to the four-year counterpart in regard to certain motivational and intellective characteristics.

In dealing with selected intellective factors among students, Lindsay, Hoover, and Kepler (1968) identified some differences between four-year university male freshmen and occupational student freshmen. Male occupational students' average SAT scores were significantly below university male students' average test scores. The high school grade point averages of occupational students were also lower than their four-year counterparts. In addition, significant differences were found in English, mathematics, and chemistry tests. Gillie (1973, p. 62) compared occupational students in public community colleges, private junior colleges, and vocational-technical school on their core battery test scores of the CGPP (Comparative Guidance and Placement Program) and discovered that occupational students in the public community colleges and private junior colleges consistently scored lower than the overall population in most of the core battery test. However, the reverse was found for the occupational students in the vocational-technical institutes.

Astin (1972), Blanchfield (1971), Cope and Hannah (1975), De Vecchio (1972), and Summerskill (1962) as well as others have pointed to the relatively high dropout rate among students associated with community colleges. This trend appeared to be especially true for those community college students who eventually plan to earn a bachelor's degree. Although this aspect of attrition and retention

falls under the general scope of articulation and transfer, it still merits mention here. Astin (1975, p. 160) suggested that this phenomenon resulted from the interaction of several factors such as the high dropout tendency of entering community college students, the lack of adequate financial and other related opportunities, absence of job opportunities, and the need for student housing. However, even when these factors were considered, two-year, associate degree granting institutions have somewhat higher dropout rates than expected. The most likely explanation for this finding, according to Astin, lies in the transfer process. Thus, since many community and technical college students apparently dropped out due to unsuccessful transferring, "counselors in two-year colleges can have a real impact on persistence if they can anticipate and reduce the problems inherent in this process" (p. 154). The problems involved and connected with high attrition rates and transfer ability are deeply embedded in fundamental social and academic adjustments to the existing student culture made on the part of the transferee.

Gillie (1973, p. 63) in his text, Principles of Post-Secondary Vocational Education, discussed the general characteristics of two-year college students in relation to their counterparts in the four-year colleges and universities. According to Gillie, the two-year college appears to be less attractive to talented students who have the intellectual and academic orientation to go to more traditional baccalaureate programs. The two-year student perceives his/her college experience as the primary vehicle for achieving upward social mobility. Cross (1968) and Gillie (1969, 1971, 1973) both perceived the two-year

college as attracting vocational-orientated and pragmatic students. According to Cross (p. 49-50), two-year college students are likely to be attracted to a college for practical reasons such as low cost, nearness to home, and because it offers the job training that should lead to a higher income. Two-year college students tend to "see their college as placing relatively low emphasis upon scholarship and a high emphasis on practicality" (p. 50). In regard to intellectual interest, Cross (p. 51) clearly differentiated between the two-year and the four-year college student. The two-year college student, when compared to the four-year college student, is more interested in applied college curricula, expects satisfaction from future business and financial success, less likely to value humanitarian pursuits, scores lower on measures of automony and nonauthoritarianism, more likely to be cautious and controlled, less likely to be venturesome and flexible in his thinking, and seeking more certain pathways to success and financial security.

Cope and Hannah (1975, p. 60) compared the "quality" of an institution and the rate of returning. They found that the highest return and eventually degree completion rates were associated with the most prestigious private universities and the lowest rates associated at the two-year college level. These trends of returning students or stopouts are illustrated in Table 3. Cope and Hannah delineated these relationships by suggesting that the real differences between the institutional rate were due to the ability and socio-economic status of the students enrolled.

TABLE 3

Later Academic Performance of Students Who Withdraw From Their College of First Matriculation

Type of Institution	Returning to College (%)	Eventually Earning Baccalaureate Degrees
Prestigious private universities	90-95	80-85
Better public universities	80-85	70-75
State colleges	40-50	30-40
Junior and Community Colleges	20-30	10-20

Note: From Revolving College Doors by R. G. Cope and W. Hannah, New York: John Wiley & Sons, 1975, p. 61.

Dropout Theory

The research in the literature on the problematic effects of attrition in higher education has been great. However, there appears to be no relevant solution to the student attrition problem in colleges. Monroe (1972, p. 208-209) indicated that the nature and purpose of the colleges involved have a significant impact on the dropout problem and there are many factors that the higher education institutions can control to curb attrition. Moreover, to attempt to delineate these factors, models need to be generated to provide additional information on the interruption of student flow towards degree completion. Addressing the seriousness of this problem, many researchers in the

area of attrition agree that there may be positive aspects of leaving college. Sexton (1965) viewed the dropping out process as constructive and beneficial to the student's overall development. Sexton continued to perceive the importance of personality factors in student persistence, although they should not be criteria of success or failure. According to Sexton, counseling services should be available to assist students with college adjustment problems and with difficulties that arise from matters unrelated to school work. Therapy should also be offered. Hence, "Persistence could be improved by more effective guidance programs during the early phases of the student's college career" (p. 303).

Cope (1978) also rejected the notion that dropping out is completely detrimental to student's well-being. Dropping out does not mean failure on the part of the student or the college. According to Cope (p. 3), many students simply terminate their enrollment when they either have fulfilled their objectives or find school unsuited to their needs and skills. The more academically inclined usually complete school elsewhere and those students who were uncertain about college probably have gone on "to work, marry and raise children, and in general become constructive citizens" (p. 3).

However, there are known negative effects that may or may not be significant, depending on the individual nonpersister. Cope and Hannah (1975, p. 6) suggested that for many the cost is high. Leaving the college often involves a substantial cost to the student in potential lost earning and immediate pocket expenses. In addition, a psychological loss may occur by self-disappointment and disappointment

from family and friends. Student persisters who graduate also have more monetary advantages once they graduate. Some researchers have also pointed out that persisters enjoy better job opportunities, more job security, more satisfactory working conditions, and higher overall job satisfaction. In addition, persisters who graduate are more optimistic about life, better informed about national issues, vote more often, and assume leadership roles more frequently. Hence, the graduate is more able to take on the responsibilities of citizenship in a more effective manner. In summary, according to Cope and Hannah (1975, p. 6):

> effective higher education is a bridge to better personal status, institutional progress, and national well-being. The effectiveness of higher education can be improved if we learn more about why a large proportion of students withdraw, what happens to them, and what can be done.

There are few, if any, models developed to explain the phenomenon of dropping out so that constructive steps may be developed to curb the attrition rate and provide invaluable steps to a retention program. There have been, however, several theoretical models that have attempted to contribute to plausible solutions to this problem. Astin (1969, 1972, 1975), Baier (1974), Panos and Astin (1968), and Wray and Leishuck (1971) as well as many other researchers have developed regression equations which predict a student's chances of successfully completing a particular college level program he/she is enrolled. These equations to determine persistence include both individual student demographic characteristics and institutional specific variables such as high school grade point averages, rank, family income, race, age, as well as type and size of the institution.

Several researchers have constructed a model of institutional fit or congruence (Astin, 1961, 1969, 1971, 1975; Cope & Hannah, 1975; Cope & Hewitt, 1971; Dresser, 1971; Rootman, 1972). Basically, this theory states that a student's withdrawal from college depends on how well his demographic background, intellectual variables, etc., and personality match the institution, with the major area to be matched being academic and social. Hence, in order for a student to have a good chance of survival at a particular institution, the student should be effectively integrated into one or more of these areas. In referring to institutional fit studies, Cope and Hewitt (1971, p. 46) found that the studies relating personality and institutional characteristics usually seek to relate the effect of the institutional presses on student behavior and development. Cope and Hewitt investigated college dropouts using an environmental press approach and summarized that their research:

> offers support for the proposition that the major environment presses in the multiversity are socially, academically, family and religiously oriented, and that dropout behavior is better understood if it is differentially related to these salent presses. (p. 46)

Ultimately, according to Tinto (1975), voluntary withdrawal then becomes a method of "coping" with the absence of congruency between the individual and his environment.

Vincent Tinto (1975) developed an institutional model involving dropouts by applying a particular theory of suicide and incorporating perceived costs and benefits analysis of individual student decisions. The theory of suicide employed by Tinto states that the breaking of one's commitment with a social institution results mainly from a lack of

integration into the lifestyle of that society.

> Given the notion that societies are composed of both structural and value elements, Kurkheim argued that the likelihood of complete withdrawal from society (suicide) increases when two kinds of integration are lacking; insufficient moral (value) integration and insufficient collective affiliation through person-person interactions (structural). (p. 37)

Furthermore, when one is viewing the college as a social system with its own value patterns and structure, Tinto argued that "one can treat withdrawal from that social system in a manner analogous to that of suicide withdrawal from the wider society" (p. 37). Hence, the lack of integration into the social system of the college will result in low commitment to the institution and increase the probability that individuals will dropout. This aspect of Tinto's theory dealt in a very similar way with the concept that insufficient academic and/or social integration results in the dropout leaving, either voluntarily or forced, the college as did the institutional fit or congruence theory previously discussed.

The second component of Tinto's theory involves the application of cost-benefit economic analysis. According to Tinto (1975):

> This viewpoint agrees that persons will tend to withdraw from college when he perceives that an alternative form of investment of time, energies, and resources will yield greater benefits, relative to costs, than does staying in college. (p. 39)

By combining the two components, Tinto (p. 40) proposed that this theoretical model is based on the premise that perceptions of reality have real effects on the observer, and, for a variety of reasons, persons of varying characteristics may hold differing perceptions of apparently similar situations. Therefore, as perceived by Tinto, this

model allows for the simultaneous "interaction" between the individual student and the institution.

Summary

In general, this paper attempted to provide the basic background information on college student attrition studies derived from a wealth of related literature. The paper was divided into nine components that were prominent in the existing literature. These areas were: (1) higher education and the concern for attrition, (2) factors involved in college student attrition, (3) demographic factors involved in college student attrition, (4) financial factors, (5) socio-economic persistence: the four-year versus the two-year college, and (9) drop-out theory.

The first area dealt with the development of the concern for attrition and eventually retention program development in higher education in this country. The review of the literature demonstrated that attrition rates have not varied drastically over most of the century. Investigators have found that during the 1920s through the 1970s, approximately 50 percent of baccalaureate students have not completed degree requirements in four years and have not returned. The attrition rate has traditionally been higher for two-year colleges. The dropout rates which are usually highest during the first year of student's enrollment, are highly variable with the lowest attrition rate being contributed

to the more prestigious four-year colleges and highest for two-year colleges.

The following section examined some of the various factors that have been shown to be related to persistence and nonpersistence. This was primarily intended as a brief overview of the many factors involved in attrition and the numerous problems and research difficulties in defining the college dropout.

The next division concentrated on some of the most researched and significant demographic factors related to college attrition. Demographic data collection and its statistical manipulation has traditionally been a major technique in the analysis of student records and attrition at the post-secondary level. Women traditionally been found to have a slightly higher probability of completing their bachelor's degree in four years than men, but men are more likely to eventually complete the degree. However, the trends concerning gender are still subject to some controversy. Other demographic analyses of various studies over the years have shown little or no relationship of age with persistence. More recent studies have pointed to a significant difference concerning age one direction or another, depending on the institution. In terms of marital status, nonpersisters have been shown to have a greater chance of being married than persisters. Racial status or ethnic background, another popular demographic variable prevalent in the literature, have little or no relationship with persistence.

A detailed look into financial factors illustrated that some studies have proclaimed these factors an important cause of

college attrition (Astin, 1975; Iffert, 1958; Iffert & Clarke, 1965; Monroe, 1972; Summerskill, 1962), while others such as Cross (1968) have stated the reverse.

The section focusing on socio-economic status and its relationship to college attendance has illustrated the tendency for more persisters to come from higher socio-economic backgrounds, while the majority of both dropouts and nonwithdrawals appeared to come from the middle socio-economic level.

A detailed inspection of the literature relating academic achievement or performance to persistence was accomplished in the following section. Generally speaking, the two-year college student is less confident and considered less academically competent than his four-year counterpart. However, some technical-occupational degree students have reversed this trend when compared on certain achievement tests. In addition, distinction must be made between voluntary withdrawals and failures, since quite frequently voluntary dropouts have had higher verbal ability and were more intellectually oriented than persisters who continued progress towards their initial degree objective. Studies have shown that the vast majority of students frequently withdraw from college for nonacademic reasons, suggesting academic disqualification appears to be a thing of the past (Tibbey, et. al., 1978). High school grade point average, high school rank, and other measures of secondary school performance have been traditionally associated with college academic success. The relationship between persistence and these factors is still unclear. However, high school performance still seems to be the best predictor of college grades. When considering the

evidence between college grades and college persistence, a relationship exists, but its exact nature is still unknown.

The subsequent section in this paper was an examination of the stated reasons for withdrawal from college. Although academic, health and family, and general dissatisfaction reasons were the most common, most items were highly varied and dependent on the specific institutional setting.

The section concerned with institution type and persistence gave a detailed account of public versus private versus two-year colleges in terms of attrition and related factors involved.

The next topic was involved with the development of theoretical models and explanations generated in the literature to account for the associated attrition rates at various institutions. Discussed in detail were the use of statistical regression techniques to enhance prediction, institutional fit or congruence models, and Tinto's (1975) model employing Durkheim's theory of suicide and economic principles of costs and benefits analysis of individual student decisions.

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